UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
OREGON OPERATIONS OFFICE
805 SW Broadway, Suite 500
Portland, Oregon 97205

December 17, 2014

Ms. Jennifer Sutter
Oregon Department of Environmental Quality
Northwest Region Office
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Dear Ms. Sutter:

EPA Region 10 has reviewed the Design Report, Riverbank Source Control Measure for the Evraz Oregon Steel facility. Attached for your consideration are the EPA's review comments as prepared by our contractor, CDM Smith. We hope that this project can proceed under the current schedules for implementation in 2015.

The review comments focus on more details and information that is recommended in the final design to improve the overall riverbank project implementation. The comments also include many suggested edits and additions to the design drawings. We are available to discuss any of these comments.

If you have any questions or would like to discuss the contents of this letter further, please feel free to contact me at (503) 326-6554.

Sincerely,

Rich Muza

Rich Muza
Remedial Project Manager

Enclosure

Review Comments on the Design Report, Riverbank Source Control Measure Evraz Oregon Steel, Portland, Oregon

General Comments:

1. The Design Report does not provide the basis for excavation depth in the upper beach area. The source control plan in Figure 5 shows planned excavation depths of 1.5 to 5 feet below ground surface (bgs), but the soil sampling results presented in Figures 2 through 4 indicate that the total depth of polychlorinated biphenyl (PCB) and/or metal concentrations exceeding cleanup levels has not been fully delineated in some of the excavation areas. However, Section 3.3 of the Design Report states additional soil samples were collected from the upper beach area in October 2014 and that the results from these soil samples will be used to further define the final excavation depth. The Design Report did not include these results. The final design should present the results of the October 2014 sampling and provide the basis for the planned excavation depths. If the basis for the planned excavation depths is to remove all soil exceeding cleanup levels, then this should be clearly stated in Section 2 (Basis of Design). The Design Report should explain the intent of the informational sampling mentioned on Sheet D-85781. It is unclear if the informational samples are intended to document the post-excavation conditions or are to be compliance samples that will determine if soil cleanup goals have been met or whether additional excavation is needed. A sampling plan should be prepared describing how the samples will be collected, frequency of collection, and parameters for analysis. Contingency measures for performing additional excavation based on informational sampling results should be described in the Design Report.

2. The 90% design does not include a high visibility demarcation marker placed between cover materials and the underlying soil, as was recommended by EPA in previous comments provided on the 50% design documents. A high visibility demarcation marker (e.g., organic construction fencing) between the contaminated soil left in place and the overlying cover will highlight areas where erosion may have removed the cover material and facilitate future monitoring activities. A demarcation marker should be placed in the riverbank and beach backfill areas.

3. Excavation in Proximity of Existing 42-inch Water Line -- Sheets D-85796 through D-85798 show excavation occurring in proximity of a 42-inch water line. In some instances, the water line is buried prior to excavation and partially or wholly uncovered during excavation. A rupture of the water line during excavation could inundate the erosion control measures and cause a release of contaminated sediment to the Willamette River. The design should provide additional measures for protection of this water line during excavation including coordination with the utility owner during excavation operations. The excavation cross section for Station 11+50.00 appears to indicate that the soil would be removed from below the water line. The design should include details for support of the water line when soil from below it is excavated.

4. Disposal of Contaminated Material -- The Design Report states that contaminated material will be suitable for disposal in a Subtitle D landfill. Excavated soil should be tested prior to disposal to determine the appropriate disposal requirements. Details on waste characterization sampling should be provided in the report, including how samples will be collected, sampling frequency, and parameters for analysis.

5. Stormwater Management -- The Design Report should include a strategy for stormwater management in excavation and soil handling areas. Stormwater management will be important with regard to mobilization of contaminated soil particles, recontamination of remediated areas, and the potential for release of contaminated material to the Willamette River. EPA recommends that stormwater generated in the construction areas be pumped to the facility's stormwater treatment system for treatment prior to discharge.

Specific Comments:

Design Report

1. Section 4, Page 4-1, Third Bullet -- Use of plastic sheeting to stabilize exposed slopes is not detailed on the plans. Plastic sheeting for protection of stockpiles is included on the plans. Please clarify where plastic sheeting will be used.

2. Section 5.1, Page 5-1 – It is recommended that the frequency of testing of imported fill be specified in the Design Report.

3. Section 5.2.1, Page 5-2, Third Paragraph -- If the October 2014 berm soil sampling data will be used to profile this soil for reuse in the reconstructed areas of the berm or as fill in the upland portion of the mill, then the details on the sampling and analysis should be provided in the Design Report. It is recommended that the details include sample locations, depths, and analytical results so that the representativeness of this this sampling can be assessed.

4. Section 6.1.2, Page 6-2, Last Bullet – It is recommended that the contingency plan for large areas of contamination extending beyond the planned riverbank/beach excavation extent include collection of confirmation samples from within the final excavation and analysis of the samples for total petroleum hydrocarbons and other associated constituents prior to backfill and placement of the bank stabilization materials.

5. Section 6.3.2, Page 6-3 -- The general notes on the design plans indicate that groundwater may be encountered in the deeper excavation areas (beach excavations extending to elevation 5 feet NAVD29 or lower). Based on the likelihood that management of excavation water will be needed (either due to groundwater inflow or inundation by the river), it is more appropriate for the discussion of water management measures to be included under implementation (Section 4), rather than discussed as a contingency measure. The discussion of excavation water management should be included to address how excavation, backfill, and compaction of saturated soils will be conducted; management of dewatering fluids and the type of materials that would be used to backfill excavation areas in the event of inundation should be included. It is recommended that this issue be addressed in the final design.

6. Section 7, Page 7-1 -- The plans state that the contractor is responsible for two years of maintenance following substantial completion of project areas. Please clarify the estimated timeframe for establishment of vegetation and long-term maintenance.

7. Section 7, Page 7-1 – Please specify that the long-term monitoring and maintenance plan will include special inspections after a seismic event that approaches or exceeds the seismic design criteria. The plan should also specify that bank or beach cover might need to be repaired or replaced to maintain containment of underlying soils in the event of a seismic event. It is recommended that these issues be addressed in the final design.

Attachment A - 90% Design Plans and Specifications:

1. Sheet D-85781 – Legend and General Notes – Sheet 1 of 2:
    a. Please review the legend and add missing line types and symbols. The legend defines OHWM as the ordinary high water mark in the legend but is referred to as OHW throughout the plans.
    b. General Notes - Note 17. Provide additional applicable City of Portland requirements (e.g. work within the Greenway Overlay Zone [Chapter 33.440], Floodplain Management [Chapter 24.50], Grading and Clearing [Chapter 24.70], Erosion Control [Title 10] and Stormwater Management [Chapter 17.38].
    c. Earthwork and Subgrade Preparation Notes - Note 6. The final design should include provisions for handling and disposal of dewatering fluids.

d. It is recommended that monitoring well groundwater level data be provided for the contractor to ascertain the need for dewatering during construction.
e. Earthwork and Subgrade Preparation Notes - Note 7. Please see general comments regarding excavation depths and information sampling.

2. Sheet D-85782 – Legend and General Notes – Sheet 2 of 2:
   a. Restoration Notes - Note 1. It is recommended that the design require the contractor to restore any disturbed areas outside of the designated work area (e.g., along truck haul routes). Please include this requirement in the list of best management practices in Section 4 of the Design Report.
   b. Submittal Notes - Note 8. The last sentence contains a typographical error; please correct "soughing" to "sloughing."

3. Sheet D-85783 – Haul Route and Staging Areas:
   a. The callouts on this sheet are difficult to read because of the aerial photo underlay.
   b. EPA recommends including an off-site haul route plan to route frequent truck traffic from the site to the landfill or fill site. Also recommended is routine off-site haul route inspection for debris when excavated material is hauled for disposal and imported material is brought onsite.
   c. Railroad crossings are shown but no railroads are shown.

4. Sheet D-85787 – Existing Condition Sheet 3 of 3:
   a. An existing wetland area is depicted on the drawing. It is recommended that the design report describe the protection or restoration provisions for this wetland area consistent with Section 404 of the Clean Water Act.

5. Sheet D-85789 – Site Preparation and Erosion and Sediment Control Cover Sheet 1 of 2:
   a. The text under "Permittees Site Inspector" references Narrative 1.3d. Please include this reference in the final design.
   b. It is recommended that Note 5 include a reference to the stockpile management procedures on Sheet D-85794.
   c. Due to the nature of sediment transport in the moving water, any transport of sediment from the remediation area into the Willamette River must be minimized. Sediment that enters the river can be transported downriver beyond the area targeted for in-river sediment remediation. It is recommended that Note 22 reference how erosion and sediment control measures will prevent any transport of sediment from the remediation area into the river.

6. Sheet D-85790 - Site Preparation and Erosion and Sediment Control Cover Sheet 2 of 2:
   a. It is recommended that the best management practices matrix for construction phases table on Sheet D-85790 include inlet protection prior to starting clearing and work above the ordinary high water elevation.

7. Sheet D-85794 – Site Preparation and Erosion and Sediment Control Details – Sheet 2 of 2:
   a. Note 2 for the Sediment Fence Detail specifies that the fence post will be driven into the ground a minimum of 24 inches; however, the detail indicates that the post will be driven to a depth of 18 inches. EPA recommends that the sediment fence presented in the fence detail be wire backed. This will increase the structural integrity of the sediment fence and further minimize the potential for contaminated sediment to migrate to the Willamette River.

8. Sheet D-85795 – Site Preparation and Erosion and Sediment Control Details – Sheet 2 of 2:
   a. Detail 1 appears to be incorrectly labeled as "Dewatering and Ponded Water Management." This detail shows construction details for the filter berm and compost sock.
   b. Notes 11 and 12 for the Berm/Compost Sock details indicate that these notes are placeholders. It is recommended that these notes be completed for the final design.

c. Methods for removal of surficial contaminated soil around trees that will remain should be included in the design. Excavated areas should be backfilled with soil meeting the Tier 1 requirements of Table 1 in the Design Report. Please address these issues in the final design.
d. Detail 3 shows sediment fencing installed at the toe of the excavation area. It is recommended that sediment fencing be set back from the excavation area so that the fencing will not be damaged by excavation.

9. Sheet D-85796 – Excavation Plan and Cross Sections Sheet 1 of 4:
   a. Note 3 assumes stockpiled material will be disposed off-site at a Subtitle D landfill. It is recommended that responsibility and requirements for waste characterization sampling and analysis be specified in the design plans and specifications.
   b. Note 5 indicates it is a placeholder. It is recommended that this note be completed for the final design.
   c. Please describe the pipe specified in Note 9 should in more detail and show it on the design plans.

10. Sheet D-85802 – Excavation and Backfill Details Sheet 3 of 3.
    a. Material Specifications - Table 1. It is recommended that soil Import and Reuse Criteria be included as part of the plans for easier reference and to be consistent with all specifications being presented on the plans.

11. Sheet D-85807 – Planting Plan Sheet 1 of 3:
    a. Please provide a reference to the list of invasive species provided on Sheet D-85812.

12. Sheet D-85809 – Planting Plan Sheet 3 of 3:
    a. The plant schedule is difficult to read and should have a larger font size.
    b. It is recommended that the planting notes reference the corresponding specifications provided on the plans.

13. Sheet D-85810 – Planting Details Sheet 1 of 2:
    a. It is recommended that detail 4 include requirements for the contractor to verify that the existing subsoil can support the vegetation planted. Please reference soil preparation specifications in these details.

14. Sheet D-85812 – Planting Specifications Sheet 1 of 3:
    a. It is recommended that the design include a plan illustrating locations of soil samples that correspond to the soil analysis reports provided.

Attachment B - Technical Memorandum, EVRAZ Oregon Steel Riverbank Source Control Measure, Evaluation of Riverbank Armor and Beach Substrate Particle Size:

1. Page 2, Last Paragraph – Please provide the basis for the assumed maximum boat speed of 11 knots.

2. Page 6, First Paragraph and Figures 2 & 3 -- The 100-year flood stage level of 27.5 feet above North American Vertical Datum of 1988 (NAVD88) appears to be incorrect. Figure 6 of the Design Report indicates that the 100-year flood stage is 27.5 feet above National Geodetic Vertical Datum of 1929 (NAVD29). Please correct the elevation data in Attachment B. For clarity, all elevation data should be referenced to a same vertical datum in the Design Report Design Report and 90% Design Plans and Specifications.

3. Page 8, Beach Substrate -- The proposed beach substrate of 12-inch minus rounded river stone is finer than the stable particle size calculated to resist erosive forces associated with boat wakes (particle size ranging from D50 = 1.0 to 1.4 feet) and some movement of the substrate is expected. Due to the potential for erosion of the beach substrate to expose underlying soil, it is recommended that measures be taken to prevent erosion to expose underlying soil in any areas. These measures would include placement of a

demarcations fabric between the beach backfill and underlying soil and long-term monitoring of the beach soil to ensure that the beach backfill has eroded to expose underlying soil.

4. Page 8, Beach Substrate – Please provide the recommended minimum layer thickness for the beach substrate.

Attachment C - Technical Memorandum, Stability Analysis Riverbank Source Control Measure:

1. Based on the results of the stability analysis, it is likely that the stabilized riverbank will experience slope movement in event of a seismic event approaching or exceeding the design level seismic event. Based on this finding, it is recommended that the long–term operation and maintenance plan provide requirements for a full inspection of the stabilized riverbank in event of seismic events approach the design criteria. The O&M plan should specify the seismic event criteria for inspection. Please address these issues in the final design.

Attachment D - Technical Memorandum, Filtration Analysis Supporting the Riverbank Source Control Measure:

1. Page 1, Third Paragraph -- The filtration geotextile will be placed in contact with slag soil and underlying alluvium/dredge soil; however, the filtration analysis is based on grain size distribution data limited to five soil samples from the slag soil unit. The slag soil data indicate that four of the samples were gravel with less than 10 percent fines and one of the samples was a silty gravel with 20 percent fines. The underlying alluvium/dredge unit consists primarily of silty sand and silt with a much higher fines content and a greater potential for fines to pass through the filtration geotextile. It is recommended that selection of the filtration geotextile be based on filtration analysis that includes the finer grained soil of the alluvium/dredge unit.

Attachment E - Vegetation Monitoring Plan

1. Section 1.2.1, Page 1, Fourth Paragraph -- Using the same location each year for transects and plots could produce bias in the coverage estimates. More accurate and representative results would be generated if the transects were offset each year with randomness incorporated into the locations and direction of transects and the plots. It is recommended that this approach be given consideration in the future work.

Attachment F - Technical Memorandum, Soil Risk Based Concentrations, EVRAZ Oregon Steel, Portland, Oregon

1. Page 5, Second Paragraph -- Because the riparian area is relatively small and adjacent to an active industrial facility, it is unlikely that birds and mammals will frequently utilize/forage in the area. Based on earlier surveys, it is also unlikely that rare, threatened, or endangered species would be present. Based on these assumptions, lowest-observed-adverse-effect levels (LOAELs) were used here to develop site specific RBCs using the models used by DEQ (1998) to develop SLVs. The basis that birds and mammals will not forage or utilize the vegetated area because it is small and near industrial activity seems unsupported. Although it is only 3 acres, the plan is to achieve 75% tree/shrub coverage with over 20% coverage of herbaceous coverage. It seems likely this area would be attractive to small birds and mammals and would provide potential sanctuary. The uses of LOAELs are based on the assumption that birds and mammals are not expected to frequent the 3-acres. It is recommended that additional information be included to justify the use of the LOAEL for the development of site specific RBCs. This justification could include information regarding the presence/absence of special status or sensitive species and site use factors. In the absence of further justification, it is recommended that the more protective no-observed-adverse-effects level (NOAEL) be used to develop the site specific RBCs.

2. Table 1 - Oregon DEQ Background for Lead -- The table lists 28 mg/kg; however, the guidance document lists 79 mg/kg as the 95% UPL for lead in the Portland Basin. It is recommended that this discrepancy be addressed.